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23 UNITED STATES DISTRICT COURT
24 FOR THE NORTHERN DISTRICT OF CALIFORNIA
25 SAN FRANCISCO DIVISION

26 AMERICAN FEDERATION OF
27 GOVERNMENT EMPLOYEES, AFL-CIO, et
28 al.,

Plaintiffs,

v.

DONALD J. TRUMP, in his official capacity
as President of the United States, et al.,

Defendants.

Case No. 3:25-cv-03698-SI

**DECLARATION OF ALEXANDRA
SHULTZ**

DECLARATION OF ALEXANDRA SHULTZ

I, Alexandra Shultz, declare as follows:

1. I am the Vice President of Science Policy and Government Relations for the American Geophysical Union (“AGU”). I have held this position since 2014. I make this statement based on personal knowledge and if called as a witness could and would testify competently thereto.
2. AGU is a 501(c)(3) membership association for Earth and space scientists founded in 1919. AGU’s mission is “to support and inspire a global community of individuals and organizations interested in advancing discovery in Earth and space sciences and its benefit for humanity and the environment.”
3. Earth and space sciences encompass multiple interdisciplinary fields such as geology, oceanography, and atmospheric science. Broadly speaking, Earth and space science includes the study of natural phenomena affecting the planet and beyond such as climate change, natural hazards, weather, oceanic activity, water availability, and solar radiation affecting the electric grid, among many other disciplines.
4. In furtherance of our mission, AGU publishes a portfolio of 24 high-impact scholarly journals and regularly convenes meetings of scientists interested in working together on discovery and solution-based science; our 2024 annual meeting had more than 30,000 attendees. Our annual meeting promotes coordination and collaboration among attendees, especially with scientists employed by the federal government.
5. AGU’s members are individual scientists who work in academia, government agencies, and the private sector. Many of our members are federal employees. At the end of 2024, AGU had more than 42,000 dues-paying members worldwide, including 29,000 members residing in the U.S., of whom 4,380 are in California. Of the members in the U.S., approximately 3,800 work in the federal government, 17,200 at universities, and 1,040 at nonprofit organizations.

6. AGU members work in agencies across the federal government, including but not limited to the National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), Department of Energy (DOE), Environmental Protection Agency (EPA), U.S. Geological Survey (USGS), U.S. Forest Service (USFS), National Aeronautics and Space Administration (NASA), Bureau of Reclamation, and Department of Agriculture (USDA).
7. AGU is deeply committed to inspiring and supporting the next generation of scientists to advance our mission, including ensuring that science is not only usable by society, but is actually used to benefit society, communities, individuals, and the environment.
8. AGU does not rely directly on grants from the federal government but has at times received a few small grants from the National Science Foundation and NASA, altogether less than 1% of total operating income.

Federal Scientific Agency RIFs and Reorganization Plans Will Directly Harm AGU and its Ability to Pursue its Mission.

9. I have seen several media reports detailing the Trump Administration's plans for Agency RIF and Reorganization Plans (ARRPs) that will be directly harmful to AGU and our members at various agencies including USDA,¹ NOAA,² NASA,³ DOE,⁴ EPA,⁵ AND NSF.⁶

¹ Erik Katz, *White House pitches layoffs, local office closures and program eliminations at USDA*, GOVERNMENT EXECUTIVE (April 15, 2025), available at:

<https://www.govexec.com/management/2025/04/white-house-pitches-layoffs-local-office-closures-and-program-eliminations-usda/404580/>; Erik Katz, *USA to slash headquarters, other staff and relocate some to new 'hubs' around the country*, GOVERNMENT EXECUTIVE (April 7, 2025), available at: <https://www.govexec.com/workforce/2025/04/usda-slash-headquarters-other-staff-and-relocate-some-new-hubs-around-country/404371/>

² Daniel Cusick et. al, *White House outlines plan to gut NOAA, smother climate change research*, POLITICO (April 11, 2025), available at: <https://www.politico.com/news/2025/04/11/white-house-plan-guts-noaa-climate-research-00286408>; Chelsea Harvey, *Trump cuts would cripple NOAA's wide-ranging science partnerships*, E & E NEWS (April 21, 2025), available at:

<https://www.eenews.net/articles/trump-cuts-would-cripple-noaas-wide-ranging-science-partnerships/>

7. The imminent federal layoffs are on such a massive scale that they will have drastic, cascading effects on AGU, our members, and the Earth and space scientific community.
8. AGU members will lose their jobs, federal funding that supports their research, and access to the federal research, data and expertise that often forms a fundamental basis for their own work.
9. AGU itself will lose membership, publication authors, and scientific conference attendees, which entails the loss of both financial resources for AGU and the intellectual contributions and collaborations from scientists that serve as the basis for advancement of the scientific enterprise and societal progress.
10. In addition, the firing of early career researchers and curtailing of the federal government as a career pathway for scientific graduate students and post-doctoral researchers will mean

³ George Petras, *Trump's cuts to NASA budget could make failure an option for space agency*, USA TODAY (April 21, 2025), available at: <https://www.usatoday.com/story/graphics/2025/04/21/nasa-budget-cuts-trump/83083256007/>; Jeff Foust, *White House proposal would slash NASA science budget and cancel major missions*, SPACENEWS (April 11, 2025), available at: <https://spacenews.com/white-house-proposal-would-slash-nasa-science-budget-and-cancel-major-missions/>

⁴ Christa Marshall and Hannah Northey, *Details emerge on surging DOE departures*, E & E NEWS (April 22, 2025), available at: <https://www.eenews.net/articles/details-emerge-on-surging-doe-departures/>; Jory Heckman, *Energy Department extends hiring freeze, deems 43% workforce non-'essential' in reorganization plan*, FEDERAL NEWS NETWORK (April 4, 2025), available at: <https://www.eenews.net/articles/details-emerge-on-surging-doe-departures/>

⁵ Tom Temin, *EPA workforce cuts mean major changes to environmental regulations*, FEDERAL NEWS NETWORK (April 11, 2025), available at: <https://federalnewsnetwork.com/workforce/2025/04/epa-workforce-cuts-mean-major-changes-to-environmental-regulations/>; Robin Bravender, *Zeldin: 65 percent EPA budget cut is 'a low number'*, E & E NEWS (February 27, 2025), available at: <https://www.eenews.net/articles/zeldin-65-percent-epa-budget-cut-is-a-low-number/>

⁶ Dan Garisto, *Trump Administration's Science Cuts Come for NSF Funding*, SCIENTIFIC AMERICAN (April 18, 2025), available at: <https://www.scientificamerican.com/article/trump-administrations-science-cuts-come-for-nsf-funding/>; Johanna Alonso, *Trump's Cuts Threaten Key NSF Undergrad Research Program*, INSIDE HIGHER ED (March 11, 2024), available at: <https://www.insidehighered.com/news/students/academics/2025/03/11/trumps-cuts-threaten-key-nsf-undergrad-research-program>

1 doing severe harm to the nation's future scientific workforce and enterprise. This impact is
2 in direct contradiction to AGU's goal of fostering the development of student and early
3 career scientists to establish an ongoing pipeline of talent for the future health of the
4 scientific enterprise and the nation.

5 11. My understanding based on the President's Executive Order 14210, and public reports and
6 agency statements that I have been able to find and review about how agencies are
7 implementing that Executive Order through these ARRP and resulting RIFs, is that these
8 agencies are planning for far more dramatic layoffs in the coming months than the prior
9 probationary employee terminations. The President ordered "large-scale" layoffs at every
10 federal agency.

11 12. These imminent "large-scale" layoffs will, with certainty, exacerbate existing understaffing
12 problems and increase workload burdens for those who remain employed at those
13 agencies, just as it will exacerbate other downstream effects detailed above. I know this
14 because of my knowledge of the important work our federal employee members do, and
15 the work of other federal employees that our organization and members rely on, as well as
16 our recent experience with the probationary layoffs on a far smaller scale.

16 **Impacts at Particular Agencies of Large-Scale Reductions in Force**

17 13. Many of the RIF/ARRP cuts target divisions within federal agencies that deal directly with
18 Earth and space science.

19 14. For example, proposed staffing cuts to the DOE workforce are 50%, or about 8,000 of its
20 16,000 employees. This proposal includes cutting more than half of science and innovation
21 programs, which would mean more than 1,800 workers eliminated. The DOE's Office of
22 Science is the nation's largest supporter of basic research in the physical sciences and the
23 steward of ten National Laboratories, supporting fundamental research for energy
24 production and security.
25

- 1 15. EPA Administrator Lee Zeldin, as directed by President Trump, has said he intends to cut
2 EPA's budget by 65 percent. Already, nearly 300 workers focused on environmental
3 justice and diversity programs have received termination notices. OMB documents also
4 show the Trump administration plans to dissolve the EPA's Office of Research and
5 Development, the agency's largest division and its scientific research arm, purging up to
6 75 percent of the 1,540 people who work there, including chemists, biologists,
7 toxicologists, and other scientists.
- 8 16. Large scale reductions to NASA and in particular to the Science Mission Directorate
9 (SMD) would be devastating to both fundamental and applied research related to space,
10 Earth, and other planets, as well as the benefits the agency supplies the nation. The SMD,
11 which oversees all planetary science, Earth science, astrophysics research, and
12 heliophysics (the study of space weather that can damage satellites and electrical grids on
13 the ground). Major space missions and telescope deployments would be delayed or
14 canceled, even those that are nearing completion, wasting billions of taxpayer dollars, and
15 putting American leadership in space science at risk. Cuts to the SMD would also impair
16 the development of technologies that the private sector relies on and cancel the many
17 opportunities NASA provides students and early career researchers, leading to a loss of
18 talent as scientists would be forced to seek opportunities outside the U.S.
- 19 17. At the Department of Commerce National Oceanic and Atmospheric Administration
20 (NOAA), media reports indicate that potentially 20 percent of the agency's 13,000
21 employees could face elimination. Media reports further suggest that the entire Office of
22 Oceanic and Atmospheric Research (OAR), which employs 2,300 people, may be
23 eliminated. Offices within NOAA, such as OAR, provide AGU members and other
24 scientists with the foundational research and data to understand hurricanes, weather
25 forecasts, extreme storms, climate change, the oceans, and natural disasters, among many
other services. OAR also disseminates critical information to state and local officials.

1 18. Our members within the USGS have shared with us reports that the Trump administration
2 plans to cut the agency overall by 20 percent, including eliminating the 1,200 employees at
3 the Ecosystems Mission Area, which provides science for the sustainable management and
4 conservation of wildlife and plants, including examining invasive species, wildlife diseases
5 and more. Also slated for elimination are the Climate Adaptation Science Centers, which
6 are a network of regional centers that partner with local natural resource managers and
7 communities to help them deal with mounting challenges of climate change, from wildfires
8 to sea level rise.

9 19. At the USDA, media reports and members indicate that thousands of employees could be
10 eliminated, including from the Agricultural Research Service, which employs more than
11 7,000 people to address the needs of farmers and food production; the Natural Resources
12 Conservation Service (NRCS), whose 12,000 employees work with farmers, ranchers, and
13 others to maintain healthy and productive landscapes; and U.S. Forest Service forest and
14 rangeland research programs, where 550 scientists conduct research vital for supporting the
15 health of forests and rangelands in the face of climate change and other ecological
16 stressors. One AGU member who was fired from NRCS reports that lack of a workforce to
17 assist landowners will result in a potential higher threat of wildfires, reduced soil quality in
18 agriculture, and reduced access to water.

19 20. Harms to AGU and our members resulting from RIFs and ARRP go beyond the
20 immediate job losses.

21 21. AGU's members in the scientific community outside the federal government rely
22 significantly on federal funding to support their scientific research, including grants from
23 the NSF, DOE, USFS, EPA, NOAA, Department of Interior, U.S. Fish and Wildlife
24 Service (FWS), and Bureau of Land Management (BLM). AGU members report that the
25 White House is insisting the NSF cut 50% or more of both its staff and its budget—95% of
which goes to fund scientific research and infrastructure in the U.S. NSF only employs

1 several hundred staff, so terminations of this breadth would drastically reorganize the
2 agency and its ability to grant scientific funding. The loss of federal employees across
3 these agencies will impair grant activities and administration, which will in turn impair the
4 work of scientists and undermine AGU's mission to support and further their research. One
5 NSF program officer and AGU member reports that the grant proposal and award process
6 has slowed to a crawl due to the initial probationary mass firings and the
7 micromanagement and confusion caused by instructions coming from the White House.
8 The program officer reports that due to the delays and uncertainty, they have seen senior
9 researchers delay the recruitment of graduate students and postdoctoral researchers leading
10 these early career researchers to abandon scientific careers. Additionally, on 24 April 2025,
11 the NSF Director abruptly resigned, with reporting suggesting that his departure could be
12 due to his unwillingness to make such altering cuts to the agency.⁷

13 22. In addition, AGU's members inside and outside of the federal government rely
14 significantly on the work of federal employees to support and further their own work and
15 scientific research. Federal employees provide not only their own data and findings, but
16 also significant expertise in addressing real world problems related to research and much
17 more. AGU members work closely, and often in direct collaboration, with federal agencies,
18 including but not limited to the NSF, NOAA, DOE, EPA, USGS, USFS, NASA, Bureau of
19 Reclamation, USDA, the National Institute of Environmental Health Sciences (NIEHS) (a
20 division of the National Institutes of Health (NIH), as well as BLM, FWS, and the Centers
21 for Disease Control and Prevention (CDC).

22 23. AGU members rely on the observations and data collected and curated by these and other
23 federal agencies, which are the backbone of global science and are particularly critical for
24 protecting health and human safety, and the environment. The scientific work supported by
25

⁷ Jeffrey Mervis, *Exclusive: NSF director to resign amid grant terminations, job cuts, and controversy*, SCIENCE (April 24, 2025), available at: <https://www.science.org/content/article/nsf-director-resign-amid-grant-terminations-job-cuts-and-controversy>

1 these federal agencies and resources protects communities by providing critical air quality
2 and water monitoring and data, improving advance warning of flooding and tsunamis,
3 refining forecasts of tornado and hurricane paths and seismic activity, anticipating wildfire
4 risk, and so much more. For example, NOAA provides essential data services that one of
5 AGU's members uses to model coastal hazards; this researcher's work contributes to the
6 greater public safety and the economy through use by the insurance and re-insurance
7 industries, and by local governments in the design of coastal architecture such as harbors
8 and nuclear installations.

9 24. The work of these federal agencies is also essential in: providing information communities
10 and the nation need to prepare for and respond to climate change; designing solutions to
11 the climate crisis by driving innovations in energy production and the sustainable
12 extraction of critical minerals for low carbon transportation; and collecting data that is used
13 to assess risks to infrastructure from natural hazards, including but not limited to floods,
14 earthquakes, avalanches, volcanoes, floods, wildfires, and sea level rise. For example, one
15 AGU member reports that the elimination of the NOAA research office will lead to the
16 ending of programs such as those at the National Weather Center in Norman, Oklahoma
17 designed to help communities prepare for, recover from, and rebuild after disasters.

18 25. The loss of staff in these federal agencies will significantly reduce the collection and
19 availability of this data and delay and undermine the administration of federal grants,
20 impairing the ability of AGU members to conduct their research. Lost staff will also
21 prevent the collaborations and consultations imperative for the application of science to the
22 public and private sector and silence the essential communications the public needs in the
23 face of extreme weather and natural disasters.

24 26. AGU's mission is to ensure that Earth and space science is robust and able to serve
25 humanity and the environment. AGU's mission is impaired by the mass termination of
federal employees because many if not all of those employees work at the interface of

1 science and society, and academic scientists who rely on federal agencies for funding or
2 data will likewise lose critical resources and collaborations that would be in service of
3 AGU's mission. One AGU member reports concern that their research program, fully
4 funded by NOAA for more than 25 years, will likely be terminated. This program tailors
5 climate adaptation guidance free of charge to community groups and organizations, many
6 of whom have limited financial resources.

7 27. One of AGU's primary roles is to foster the development of student and early career
8 scientists and ensure the health of our Earth and space scientific enterprise overall for the
9 benefit of the nation. The firing of early career researchers and curtailing of federal
10 government as a career pathway for scientific graduate students and post-doctoral
11 researchers, combined with the loss of federal grants, will mean doing severe harm to the
12 nation's future scientific workforce and enterprise, and by implication, to AGU. One Ph.D.
13 student AGU member reported that the secured position they had counted on at NOAA
14 was suddenly no longer available and they were forced to search for jobs and revise their
15 resume while simultaneously writing their dissertation.

16 28. The mass termination of federal employees will also result in lost member dues and lost
17 revenue from scientists to AGU who may not be able to publish in AGU journals or attend
18 AGU meetings. In 2024, federal employees made up 13% of attendees (4,200) and
19 attendees from academia, who often rely on federal government funding, made up 55%
20 (17,300). Venues for our annual meetings—which draw up to 30,000 attendees—are
21 secured by contracts a decade in advance, and because these significant meeting costs are
22 fixed, a reduction of attendees does not equate to a reduction of expenses because these
23 contracts cannot be renegotiated short of force majeure.

24 29. Similarly, around 30% of scientists who publish in AGU journals are supported at least in
25 part by U.S. federal funding. More than 1,300 articles published in 2024 were authored by

1 government researchers. The imminent RIFs and Reorganization Plan will significantly
2 reduce the number of scientists who are able to publish in our journals.

3 30. AGU has already been forced to divert substantial resources away from the central work of
4 the organization in order to address the impacts to our members and scientific community
5 as a result of these mass terminations. Addressing these urgent needs has required AGU
6 leadership and staff to abandon previously planned projects and instead work around the
7 clock to help respond to the current crisis. For example, we recently began to pivot away
8 from our focus on a previous scientific priority to assisting those members who lost their
9 federal jobs.

10 **The Prior Recent Terminations of Probationary Employees Also Provide a Window Into**
11 **the Imminent Harm From the Planned Larger-Scale Reductions in Force.**

12 31. The recent mass termination of probationary federal employees previously harmed AGU
13 and our members in ways that are predictive of the harm to come on a much larger scale.

14 32. Many recent probationary employee terminations were AGU members. Fired probationary
15 employees included AGU members at the NSF, NOAA, DOE, EPA, USGS, and USFS.
16 These terminations caused very significant harm already to AGU and its members.

17 33. For example, NOAA fired the only air quality forecaster in the Environmental Modeling
18 Center of the National Weather Service, which may cause the agency to suspend or
19 terminate its early warning system. Another AGU member terminated from NOAA was set
20 to begin work processing a backlog of over 300 applications for permits in the Florida
21 Keys National Marine Sanctuary. Termination of another AGU member, a
22 communications specialist at NOAA Fisheries based in the Monterey Bay Duty Station in
23 California, broke a key link in the chain of information sharing between the agency and the
24 public. And the termination of two other AGU members from the USDA—both highly
25 experienced scientists and program managers for the Data Science for Food and
Agricultural Systems—created a gap in leadership and expertise within the USDA that will

1 likely slow down or halt important projects related to soil health, climate change
2 adaptation, and sustainable agricultural practices. This disruption had far-reaching
3 consequences for farmers, ranchers, and rural communities who rely on USDA-supported
4 programs and data for decision-making and innovation in the agricultural sector.

5 34. The termination of probationary employees at these agencies had a disruptive effect on
6 many critical activities. For example, AGU members reported that terminations at the EPA
7 resulted in halting work studying forest density and snowpack, the results of which are
8 essential for managing western water availability. Members also reported that terminations
9 at NOAA reduced the number of staff working on the agency's tsunami program, a
10 program that requires 24/7 monitoring and that was already understaffed. Reduced staffing
11 levels at already-overtaxed warning centers and support offices will make tsunamis more
12 dangerous.

13 I declare under penalty of perjury, pursuant to 28 U.S.C. § 1746, that the foregoing is true and
14 correct. Executed in Washington, D.C. on April 26, 2025.

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19 Alexandra Shultz
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